

SPECIES AND COMMUNITIES OF CONCERN IN MICHIGAN

Information for Family Forest Owners

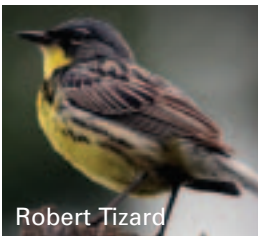
One of the environmental issues of concern today is the worldwide decline in forest habitat and the related loss of biodiversity. As a good land steward, it's important to be aware of plant and animal species and ecological communities of concern that are designated as "imperiled, critically imperiled, threatened, or endangered" and how forest management activities on your lands may affect these species. Critically imperiled (G1) or imperiled (G2) species or ecological communities are globally rare or, because of some factor(s), especially vulnerable to extinction. They are designated as imperiled or critically imperiled by non-government organizations such as NatureServe (and its constituent Natural Heritage programs) or the IUCN (The World Conservation Organization). Threatened and endangered species are listed by government agencies under the U.S. Endangered Species Act or the Canadian Species at Risk Act and may also be listed under state or provincial laws; yet they may or may not be listed as critically imperiled or imperiled, globally.

The **Michigan Department of Natural Resources'** and **Michigan Natural Features Inventory's** websites can provide information on species and communities of concern in your area. Visit www.mcgi.state.mi.us/esa or www.web4.msue.msu.edu/mnfi. **NatureServe**, www.natureserve.org, has additional information on species and communities of concern. These organizations coordinate the management of inventories of biological diversity in the U.S. and Canada.

The Sustainable Forestry Initiative® (SFI) program (www.aboutsfi.org) combines the perpetual growing and harvesting of trees with the long-term protection of wildlife, plants, soil and water quality. To meet the SFI Standard, program participants who procure wood from family forest owners provide outreach opportunities to family forest owners on conservation of biodiversity for imperiled species.

In Michigan, the SFI program has partnered with Forests for Watersheds & Wildlife™ to provide you with a series of profiles on species of concern native to Michigan's forests. The species and communities featured in this profile are examples of many that depend on family forest owners for protection. To view other profiles, visit www.forestedflyways.org.

Kirtland's warbler – *Dendroica kirtlandii*



Robert Tizard

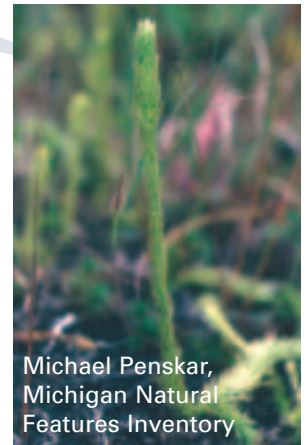
Cutting and replanting of jack pine on a 50-year rotational basis and prescribed fire benefits the Kirtland's warbler.

The Kirtland's warbler is ranked as a globally, critically imperiled (G1) species and is a federally listed endangered species. Except for a location in Ontario, the only known breeding grounds are in 14 Michigan counties in the northern Lower and Upper Peninsulas. The largest populations are found in Alcona, Crawford, Ogemaw, Oscoda, and Roscommon counties during May to late September. This large warbler is yellow-breasted and blue-grey streaked with black on its back and sides. A broken, white eye-ring and two white wing bars are also characteristics. These ground-nesters breed in young, shrubby jack pine forests of 80 acres or more interspersed with grassy clearings. Once trees reach 16-20 feet, the loss of lower branches and changes in understory create poor nesting conditions. Fire suppression has reduced suitable habitat as it historically removed older trees and released seeds from pine cones. Additionally, nest parasitism by brown-headed cowbirds has been a threat. Through a cowbird trapping program, and intensive management of breeding grounds, numbers have increased from several hundred individuals in the 1980's to 1,415 singing males in 2005.



Northern appressed clubmoss – *Lycopodiella subappressa*

The full distribution of the Northern appressed clubmoss, a globally imperiled (G2) species, is unknown, due to a recent distinction between this species and two other clubmosses. In Michigan, it is currently documented in several southwestern counties along Lake Michigan, dispersed populations in Crawford, Saginaw, Midland, St. Clair, and Jackson counties and 4 northeast counties of the Upper Peninsula. The plant spreads through horizontal stems and has upright shoots of approximately 15 centimeters. The appressed (flattened and tight) leaves along the stems and shoot usually have a smooth edge. The strobilis, the spore-bearing, top part of the upright shoot is thicker and 1/3 or less shorter than the shoot. The clubmoss thrives in non-woody, open areas that have moist, acidic, sandy peat soils such as those found in seasonally wet shallow pits and ditches. The primary threat to remaining populations is shading by woody shrubs and hardwoods.



Michael Penskar,
Michigan Natural
Features Inventory

The Northern appressed clubmoss is easiest to identify during the late summer, when the strobili are in bloom

Jack Pine Barrens (Northern pin oak)/Little Bluestem Prairie – *Pinus banksiana* - (*Quercus ellipsoidalis*)/ *Schizachyrium scoparium*



Thomas Funke

Numerous wildlife species, including the Kirtland's warbler, rely on this community.

Jack pine barrens are a globally imperiled (G2) community type that once covered almost 270,000 acres in Michigan. Now, only a few hundred acres, located in Otsego, Crawford, Grand Traverse, Wexford, Lake and Clare counties, remain. Grasses, particularly little bluestem, and other herbaceous plants are the dominant vegetation. Jack pine is the primary canopy tree, scattered throughout at roughly 12-50 trees per acre. A flat or gently rolling topography and dry, sandy, and acidic soils are characteristic. In Michigan, jack pine barrens have only been found on excessively-drained Grayling sands with a pH of 4.5-6. Tree plantations and reduced fire frequency have contributed to this community's decline. Without fire, northern pin oak and other hardwoods can become dominant. Today, many forest managers mimic natural fire disturbances by creating large, irregular openings intermixed with undisturbed areas. Prescribed burning at 10-20 year intervals or thinning at sites with the appropriate seedbank and soils are also used for restoration.

Technical and Cost-share Assistance:

The Partners for Fish & Wildlife program of the U.S. Fish & Wildlife Service offers technical and financial assistance to landowners for restoration of native habitat types. Contact: (517) 324-5270 or go to www.fws.gov/midwest/Partners/michigan.html.

The Michigan Department of Natural Resources offers technical and financial assistance to landowners to help determine how to sustainably manage their land through the Forest Stewardship Program - contact (517) 335-3355. In addition, there is assistance for conservation projects through the Landowner Incentive Program - contact (517) 241-1153.



Produced by Forests for Watersheds & Wildlife™ (FW²), a program of the American Forest Foundation.
FW² works with partners and family forest owners to conserve and create critical habitat for imperiled wildlife species.

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